ABSTRACT

A multi-channel DSL communication link in accordance with the present invention may comprise a plurality of N DSL transceivers each configured with at least two bi-directional serial data interfaces with a first bi-directional serial data interface of a

5   first DSL transceiver coupled to a communication interface and a second bi-directional serial data interface of the first DSL transceiver coupled to a first bi-directional serial data port of a second DSL transceiver. Each subsequent DSL transceiver may be coupled in this manner with its Nth-1 and N^{th}+1 nearest DSL transceivers, with a bi-directional serial data interface of a last DSL transceiver coupled to the second bi-directional serial data

10   interface of the preceding DSL transceiver. A method for transferring data between multiple DSL transceivers is also disclosed. In its broadest terms, the method can be described as follows: recovering a mapped portion of a downstream data stream at each of N DSL transceivers; communicating the recovered portion of the downstream data stream to the next closest DSL transceiver to a communication interface; mapping an

15   upstream data stream for transmission via each of the N DSL transceivers; and using a second data interface coupled to each respective DSL transceiver to communicate mapped portions of the upstream data stream to the next furthest DSL transceiver from the communication interface.